

REMARKS

This Amendment is being filed together with a Request for Continued Examination in response to the Final Rejection of March 13, 2006 ("Final Rejection"), the Advisory Action of May 24, 2006 ("Advisory Action"), and the Notice of Panel Decision from Pre-Appeal Request for Review of August 7, 2006 ("Pre-Appeal Decision").

Claims 1-5 and 66-69 are pending with claim 1 being independent. Claim 1 has been amended to correct an informality identified in a previous office action. Claims 66-69 have been added. No new matter has been added. For at least the following reasons, Applicants respectfully request reconsideration and allowance of this application.

Examiner Interview

Applicants thank Examiners Blake and Ashley for the courtesy of a personal interview with Applicants' representative on October 4, 2006. The substance of the interview is generally set forth in the interview summary of the same date.

Rejection of Claims 1-4 Under 35 U.S.C. § 103(a)

Claims 1-4 have been rejected under 35 U.S.C. § 103(a) as being obvious over Lee (U.S. Pat. No. 6,272,961) in view of Jameson (U.S. Pat. No. 3,777,792), Weissman (U.S. Pat. No. 4,885,965), Mayfield (U.S. Pat. No. 5,063,806), Rueb (U.S. Pat. No. 5,577,428), Welch (U.S. Pat. No. 5,906,538), Greenland (U.S. Pat. No. 6,080,041), and Gorgol (U.S. Pat. No. 6,273,081). For at least the following reasons Applicants respectfully request withdrawal of this rejection. First, the Final Rejection has failed to establish a prima facie case of obviousness. In particular, the prior art does not teach or suggest all of the claim limitations, there no suggestion or motivation to arrive at the claimed invention, and the secondary references relate to non-analogous art. Second, even if the Final Rejection has established a prima facie case of obviousness, objective evidence of nonobviousness related to the criticality of the switch location counsel against a finding that the claimed invention is obvious. These reasons will be discussed in turn.

I. No Prima Facie Case of Obviousness

The Final Rejection has failed to establish a prima facie case of obviousness against claim 1. To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art references must teach or suggest all the claim limitations. M.P.E.P. § 2142. At least the first and third of these criteria have not been satisfied. In addition, the prior art references do not relate to analogous art. These reasons will be discussed in turn.

A. Prior Art References Do Not Teach or Suggest All Claim Limitations

A prima facie case of obviousness has not been established because the cited prior art fails to teach or suggest all of the claim limitations of claim 1. "To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." M.P.E.P. § 2143.03 (citing In re Royka, 490 F.2d 981 (CCPA 1974)). Independent claim 1 relates to a beveling head saw with a power switch disposed on the assembly so that the switch remains stationary while the head bevels. In particular, claim 1 recites, among other things, "a switch electrically connected to the motor assembly and disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary." The cited prior art fails to teach or suggest at least these claim features.

Lee describes a beveling head saw, but, as acknowledged on page 2 of the Office Action, fails to describe the stationary switch of claim 1. For this feature, the Final Rejection instead relies upon the teachings of Jameson, Weissman, Mayfield, Rueb, Welch, Greenland, and Gorgol, which according to the Final Rejection "disclose saws with switches in various locations." However, as acknowledged by the Final Rejection and as discussed in greater detail below, none of these references describe a beveling head saw with a stationary switch. In particular, the Final Rejection states that "the specific location of the switch that Applicant is claiming is not specifically taught" by any of these references. Thus, the Final Rejection acknowledges that the cited prior art fails to describe all of the features of claim 1.

Rather, the Final Rejection asserts that these references are “cumulative evidence that a switch can be placed almost anywhere on a saw.” The Final Rejection relies upon In re Japitkse, 86 USPQ 70 (CCPA 1950), to argue that “the location of the switch would have been an obvious matter of choice dependent on the suitability of that location for whatever desired reason, such as dexterity, eye coordination, or standing position of the operator, ease of manufacturing, or position of the work piece and/or product.”

“However, ‘The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.’” M.P.E.P. § 2144.04(IV)(C) (quoting Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984)). As explained further in the next section, the prior art cited in the Final Rejection does not provide any such motivation or suggestion for making the proposed modification to Lee. Therefore, the legal precedent of In re Japitske is not applicable to this application.

For at least the foregoing reasons, the Final Rejection fails to satisfy the requirement for a prima facie case of obviousness that all the claim limitations be taught or suggested by the prior art.

B. No Motivation or Suggestion to Combine Teachings of References

In addition or in the alternative, a prima facie case of obviousness has not been established because there is no motivation or suggestion to modify Lee in the way suggested in the Final Rejection. “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” M.P.E.P. 2143.01. “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” Id. (citing In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)). In this

case, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to arrive at the claimed invention. Moreover, if the “proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” Id. (citing In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). In this case, several of the references relied upon by the Final Rejection teach away from the proposed combination, rendering the combination unsatisfactory for its intended purpose.

Jameson relates to a mortise cutting machine that automatically feeds and cuts bedframes. The machine includes a feed table 11, a rotary work fence 12, and a saw assembly 13. The saw assembly includes a saw 30 driven by a motor 37. Jameson is silent as to a switch that is electrically connected to the motor assembly, as recited in claim 1. By failing to show any switch whatsoever, Jameson provides no motivation or suggestion to change the location of the switch in Lee.

Weissman relates to a rotary table saw used for cutting sections of dental models. The saw includes a base 12 that houses a motor 41, a saw blade 50 and that includes a switch 24. Coupled to the base 12 is a work table that moves up and down relative to the base to hide and expose the saw blade. The motor 41 and the saw blade 50 do not move or bevel. Because Weissman shows a switch coupled to a motor and saw assembly that does not move or bevel, one of ordinary skill in the art would not be motivated to look to Weissman for a teaching of a stationary switch for a beveling head saw. Accordingly, Weissman provides no motivation or suggestion to change the position of the switch in Lee.

Mayfield relates to a radial arm saw with a work table 12, a support arm assembly 18, and a carriage 24 that supports a saw blade 30, and an anti-kick device 36. The carriage 24 is pivotable about cylindrical portion 20 and also enables the saw blade to be moved longitudinally. The radial arm saw includes three switches 54, 84, and 80 that may arguably correspond to the claimed switch. However, each of these moves with the carriage 24, rather than remaining stationary, as required by the claim. Switch 54 turns on and off the kick preventing means and is

located directly on the handle of the carriage. Rheostat 84 adjusts the speed of the motor driving kick preventing means and is coupled with the carriage 24 to pivot with the carriage about cylindrical portion 20. Switch 80 turns on and off a clutch and is positioned on the carriage and pivots with the carriage. Because each of the switches of Mayfield are not stationary, Mayfield provides no motivation or suggestion to make the switch of Lee stationary. To the contrary, Mayfield teaches away from the proposed modification to Lee.

Rueb relates to an apparatus 10 for holding a portable circular saw 85 and for holding and guiding a workpiece across the saw 85. Because Rueb describes the switch as being on a portable saw 85, the switch inherently moves with the saw. Thus, Rueb provides no motivation or suggestion for moving the switch of the saw of Lee. To the contrary, Rueb teaches away from the proposed modification of Lee.

Welch relates to a cutting apparatus 10 for cutting a work piece 24. The cutting apparatus 10 includes a motor unit 11 mounted to a mounting plate 34, which is attached to a planar member 17 by hinges 40. A bolt 41 extends through a lift 42 which extends underneath the mounting plate 34. As the bolt 41 is rotated clockwise, the lift 42 rises upwardly, along the bolt 41, and elevates the mounting plate 34, and selectively elevating an abrasive wheel 12 to a desired height. The abrasive wheel 12 extends in a substantially vertical plane perpendicular to a longitudinal axis of the arbor 13 and motor unit 11. A plurality of guide rails 14, 15 and 16 are mounted on the top surface 18 of the planar member 17, parallel the abrasive wheel 12. A switch (not labeled) is mounted to the planar member 17 and electrically connected to the motor unit 11.

The motor unit 11 of Welch (which arguably corresponds to the claimed motor assembly) does not pivot "about an axis substantially parallel to the longitudinal axis" of the guide rail 14 (which arguably corresponds to the claimed first rail) in order to allow the saw assembly to perform bevel cuts. Rather, the motor unit 11 of Welch pivots on hinges 40 to enable adjustment of the height of the abrasive wheel 12. Thus, Welch does not provide motivation or suggestion to move the switch of Lee to so that the switch is "disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary," as

recited in claim 1, as moving the switch as taught by Welch would not achieve the claimed invention.

Greenland relates to a saw 10 with a rectangular frame 12, a sliding table 14, and a pivoting support arm 16 that holds a motor assembly 18 above the table. The motor assembly 18 includes a cutting blade 20 mounted to an electric motor 22 within a housing 24. The motor assembly includes a lever 28 mounted to a power switch 30 to automatically turn on the motor as a tile is moved toward the motor assembly 18. Thus, the switch 30 pivots with the motor housing 24. Thus, Greenland fails to describe or suggest modifying the switch of Lee to be stationary. To the contrary Greenland teaches away from the proposed modification of Lee by teaching a switch 30 that moves with the motor housing 24.

Gorgol relates to a gasoline powered masonry saw 10 that includes a gasoline engine 18, an arbor 20, a cutting blade 22, a dust collection pan 24, and a cutting tray 26, supported on a frame 12 with vibration dampening material. Gorgol is silent as to a switch that is electrically connected to the motor assembly, as recited in claim 1. By failing to show any switch whatsoever, Gorgol provides no motivation or suggestion to change the location of the switch in Lee.

Thus, none of the secondary references cited in the Office Action, taken in any combination, provide a motivation or suggestion to modify the location of the switch of Lee to be “disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary,” as recited in claim 1.

The Final Rejection instead argues that “the location of the switch would have been an obvious matter of choice dependent on the suitability of that location for whatever desired reason, such as dexterity, eye coordination, or standing position of the operator, ease of manufacturing, or position of the work piece and/or product.” Although the suggestion or motivation to modify a reference need not be explicit, the motivation or suggestion must be drawn from “the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” In re Kahn, No. 04-1616 (Fed. Cir. March 22, 2006).

The purported suggestion or motivation set forth in the Office Action is not drawn from the teachings of the prior art, the knowledge of one of ordinary skill in the art, or the nature of the problem to be solved. First, as explained above, this motivation or suggestion is not apparent in the prior art. Second, the Office Action provides no evidence of the knowledge of one of ordinary skill in the art that would motivate the proposed modification of Lee. Third, the Office Action fails to set forth the nature of the problem to be solved in a way that would motivate the proposed modification of Lee.

Rather, as described in greater detail below with respect to the objective evidence of nonobviousness, having the switch remain stationary, as recited in claim 1, provides significant advantages over the moveable switch shown in Lee. For example, the stationary switch allows the user of the saw to know the location of the switch at all times during operation of the device, reducing fatigue, frustration, etc. in locating a moving switch. Nothing in the prior art, the knowledge of one of ordinary skill, or the nature of the problem to be solved suggests modifying Lee to achieve this result. Instead, the proposed motivation or suggestion appears to be based on impermissible hindsight.

For at least the foregoing reasons, the Final Rejection fails to provide a motivation or suggestion for the modification of Lee sufficient for a prima facie case of obviousness.

C. Secondary References Relate to Non-Analogous Art

The Final Rejection also fails to establish a prima facie case of obviousness because the secondary references relate to non-analogous art. “In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.” M.P.E.P. § 2141.01(a) (quoting In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992)). The secondary references relied upon by the Examiner do not relate to beveling head saws, and are therefore outside of Applicants' field of endeavor.

Jameson relates to a mortise cutting machine that automatically feeds and cuts bedframes. Weissman relates to a non-beveling saw used for cutting sections of dental models. Mayfield

relates to a radial arm saw that is pivotable about cylindrical portion 20, but does not bevel. Rueb relates to an apparatus 10 for holding a portable circular saw 85, which does not bevel or move. Welch relates to a cutting apparatus 10 that pivots on hinges 40 to enable adjustment of the height, but not beveling, of the abrasive wheel 12. Greenland relates to a saw 10 with a rectangular frame 12, a sliding table 14, and a pivoting, but non-beveling, support arm 16 that holds a motor assembly 18 above the table. Gorgol relates to a gasoline powered masonry saw 10 that includes a non-beveling cutting blade 22. Because these references relate to non-analogous art they cannot form the basis of an obviousness rejection against claim 1.

II. Objective Evidence of Nonobviousness

Even if the Final Rejection establishes a prima facie case of obviousness, objective evidence related to the criticality of the switch location – as demonstrated by the specification and the attached Affidavit of Stuart Wright Under 37 C.F.R. § 1.132 (“Affidavit”) – rebuts this prima facie case of obviousness. “Affidavits or declarations, when timely presented, containing evidence of criticality or unexpected results, commercial success, long-felt but unsolved needs, failure of others, skepticism of experts, etc., must be considered by the examiner in determining the issue of obviousness of claims for patentability under 35 U.S.C. 103.” M.P.E.P. § 706.01(a). “If rebuttal evidence of adequate weight is produced, the holding of prima facie obviousness, being but a legal inference from previously uncontradicted evidence, is dissipated.” In re Piasecki, 745 F.2d 1468 (Fed. Cir. 1984). The specification and the Affidavit provide sufficient objective evidence of the criticality of the switch location to rebut the prima facie case of obviousness. The Affidavit will be discussed followed by concerns with a draft form of the Affidavit raised by the Examiners during the Examiner Interview.

A. Objective Evidence in Affidavit

As set forth in the Affidavit, the power switch of the saw that is the subject of this patent application is positioned on the support assembly so that when the motor assembly is pivoted about its pivot axis, the switch remains stationary. The position of the power switch was

carefully chosen after months of significant research into the positioning of the power switch, as follows.

The design team reviewed the positioning of switches on prior beveling head saws, of which there are two types. In the overhead beveling head tile saws we reviewed (an example of which is depicted in the attached Exhibit A), the power switch is located on the motor assembly, so that the switch pivots with the motor assembly. In the angle grinder-based tile saws we reviewed (an example of which is depicted in the attached Exhibit B), the power switch is on a moving portion of the grinder, so that the power switch moves with the grinder body. The design team discovered that operation of the switches on these prior tile saws is difficult and cumbersome for the user. The moving switch on these tile saws often is difficult to locate as the tile saw is being operated, and the user often experiences fatigue and frustration in locating the switch on the tile saw.

The design team then considered and researched positioning the power switch on a variety of alternative positions on our new tile saw. As a result of our extensive research, they determined that positioning the power switch on the support assembly so that the switch remains stationary relative to the pivoting motor assembly is optimal. Such positioning of the power switch is critical to the ergonomics and ease of use of the tile saw. For example, this positioning of the power switch enhances the ability of the user to locate the switch during operation of the tile saw. This enables the user to both turn on and shut off the tile saw quickly and easily without having to adjust the position of other portions of the tile saw. In addition, this positioning of the tile saw switch reduces user fatigue and frustration when using the tile saw.

Placing the power switch on the support assembly so that it remained stationary required the design team to overcome several technical and financial challenges. The switch had to be wired in such a manner that the switch would remain stationary in a position further removed from the motor than in previous tile saws. This involved additional cost considerations, which needed to be reduced in order to price the tile saw in such a way to be attractive to the end user.

The stationary switch of this application has been included as a feature on the DeWalt D24000 10" Wet Tile Saw (photographs of which are attached as Exhibit C). As shown in

Exhibit C, the tile saw switch remains stationary, even when the head bevels. The design team has found that this feature provides significant advantages in the ergonomics and ease of use of the tile saw, including allowing the user to locate the switch during operation of the tile saw, enabling the user to both turn on and shut off the tile saw quickly and easily without having to adjust the position of other portions of the tile saw, and reducing user fatigue and frustration when using the tile saw.

Thus, the Affidavit sets forth objective evidence as to the criticality of the switch position sufficient to rebut the purported *prima facie* case of obviousness set forth in the Final Rejection.

B. Concerns with Draft Affidavit During Examiner Interview

Despite the concerns with a draft form of the Affidavit, raised by the Examiners during the Examiner Interview, the Affidavit contains persuasive objective evidence of nonobviousness. First, the Examiners preferred that the Affidavit come from a disinterested third party instead of one of the inventors. However, an “affidavit of an applicant as to the advantages of his or her claimed invention, while less persuasive than that of a disinterested person, cannot be disregarded for this reason alone.” M.P.E.P. § 716.01(c) (citing Ex parte Keyes, 214 USPQ 579 (Bd. App. 1982); In re McKenna, 203 F.2d 717, 97 USPQ 348 (CCPA 1953)). Although the affiant, Mr. Wright, is an inventor, Mr. Wright is well qualified to make this Affidavit, owing to his extensive education and eighteen years of experience working as a professional industrial designer on ergonomic features of devices. Moreover, Mr. Wright’s Affidavit is based on extensive research conducted by the design team in determining the appropriate location of the switch. Mr. Wright is not seeking to simply bolster his application through unsupported contentions and opinions. Thus, the fact that Mr. Wright is an inventor should not cause any less weight to be accorded to Mr. Wright’s Affidavit.

Second, the Examiners were concerned that the draft Affidavit lacked sufficient facts with supporting data. The Affidavit contains significant factual information regarding the research into other beveling head tile saws with non-stationary switches and the selection of the switch position as embodied in claim 1 of the invention. Included with the Affidavit are color photographs of both prior art tile saws without stationary switches and a commercial

embodiment of the present invention in the DeWalt D24000 10" Wet Tile Saw. Moreover, to the extent the Affidavit contains opinion evidence, "such testimony is entitled to consideration and some weight so long as the opinion is not on the ultimate legal conclusion at issue." M.P.E.P. § 706.01(c). The opinions set forth in the Affidavit are not of an ultimate legal conclusion (non-obviousness) and are grounded in factual evidence. Accordingly, Mr. Wright's Affidavit is no deficient for lack of sufficient factual information.

Third, the Examiners requested a showing of unexpected results or long felt need. However, a showing of criticality, such as the criticality of the switch position set forth in the Affidavit, is a valid objective consideration of non-obviousness independent of unexpected results or long felt need. M.P.E.P. § 706.01(a). Moreover, the fact that other beveling head tile saws had been on the market without stationary switches, and that the present invention was the first to introduce a stationary switch on such a tile saw is evidence of a long felt need for such a switch. Accordingly, the Affidavit is not deficient for failure to show long felt need or unexpected results.

Finally, the Examiners requested that Applicants note the location in the specification where the criticality of the switch is mentioned. The criticality of the switch 92 is disclosed at least at paragraph 00133 and Figures 1 and 13A of the specification.

III. Conclusion

For at least the foregoing reasons, the Final Rejection has not established a prima facie case of obviousness as to claim 1. Moreover, even if the Final Rejection has established a prima facie case of obviousness, there is objective evidence to rebut the prima facie case. Therefore, claim 1, and its dependent claims 2-4, are patentable over Lee, Jameson, Weissman, Mayfield, Rueb, Welch, Greenland, and Gorgol, or any combination thereof.

Rejection of Claim 5 Under 35 U.S.C. § 103(a)

Claim 5 has been rejected under 35 U.S.C. § 103(a) as being obvious over Lee, as applied to claim 1 above, and further in view of Klingens (U.S. Pat. No. 2,691,398). Claim 5 depends from claim 1 and is allowable for at least the reasons discussed above with respect to claim 1.

Moreover, Klingens does not remedy the deficiencies of Lee discussed above with respect to claim 1. In particular, Klingens does not describe or suggest, nor is it relied upon to show, at least the claimed "switch electrically connected to the motor assembly and disposed on the support assembly so that, when the motor assembly is pivoted about the pivot axis, the switch remains stationary." For at least these reasons, claim 5 is patentable over Lee and Klingens.

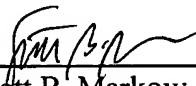
Conclusion

Applicants do not acquiesce to the characterizations of the art. For brevity and to advance prosecution, however, Applicants have not addressed all characterizations of the art, but reserve the right to do so in further prosecution of this or a subsequent application.

No fees are believed to be due. Please apply any charges or credits to deposit account 02-2548.

Respectfully submitted,

Date: 11/15/2006



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